



DRAFT PERMIT

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STATE OF ARIZONA
AQUIFER PROTECTION PERMIT NO. 02003800 (LTF #74116, PLACE ID 3532)
Arizona Electric Power Cooperative, Inc. (AEPCO) Solid Waste Landfill

1.0 AUTHORIZATION

In compliance with the provisions of Arizona Revised Statutes (ARS) Title 49, Chapter 2, Articles 1, 2 and 3, Arizona Administrative Code (AAC) Title 18, Chapter 9, Articles 1 and 2, AAC Title 18, Chapter 11, Article 4 and amendments thereto, and the conditions set forth in this permit, the Arizona Department of Environmental Quality, Waste Programs Division hereby issues an Aquifer Protection Permit to the Arizona Electric Power Cooperative, Inc. (AEPCO) Solid Waste Landfill located near Cochise, Arizona, in Cochise County. The Solid Waste Landfill Facility includes a disposal area for non-hazardous solid wastes and a separate fenced-in area for disposal of regulated asbestos-containing material. The facility is located adjacent to the 200-acre Closed-in-Place Combustion Waste Disposal Facility (CWDF) of the Apache Generating Station and is 26 acres in size. The facility is located in the NE quarter of Section 10 and the NW corner of Section 11 of Township 16 South, Range 24 East in Cochise County, Arizona.

This permit becomes effective on the date of the Waste Programs Division Director’s signature and shall be valid for the operational life of the facility and any period during which the facility is subject to a post-closure plan provided that the facility is constructed, operated, and maintained following all the conditions of this permit including the design and operational information documented or referenced below.

1. Following all the conditions of this permit including the design and operational information documented or referenced below, and
2. Such that Aquifer Water Quality Standards (AWQS) are not violated at the applicable point(s) of compliance (POC) set forth below, or if an AWQS for a pollutant has been exceeded in an aquifer at the time of permit issuance, that no additional degradation of the aquifer relative to that pollutant, and as determined at the applicable POC, occurs as a result of the discharge from the facility.

1.1 PERMITTEE INFORMATION

Facility Name: Arizona Electric Power Cooperative, Inc. (AEPCO) Solid Waste Landfill
Facility Address: 3525 N Highway 191 S, Cochise, Arizona 85606
Facility Contact: Michelle Freeark (520) 586-5122

Permittee as Owner/Operator: Arizona Electric Power Cooperative, Inc.

Latitude: 32° 03' 44" North **Longitude:** 109° 52' 54" West

1.2 AUTHORIZING SIGNATURE

Laura L. Malone, Director
Waste Programs Division
Arizona Department of Environmental Quality

Signed this _____ day of _____, 2019

THIS AMENDMENT SUPERSEDES ALL PREVIOUS PERMITS

2.0 SPECIFIC CONDITIONS [A.R.S. §§ 49-203(A)(4), 49-241(A)]

This Aquifer Protection Permit (APP) is issued to update financial assurance mechanisms, closure and post-closure plans and cost estimates, restrictive covenant, groundwater monitoring plan for replacement monitoring wells, and the installation of landfill gas monitoring probes and landfill gas monitoring plan in accordance with the *Aquifer Protection Permit Amendment Application AEPCO Solid Waste Landfill, Apache Generating Station, Cochise, Arizona* as submitted by Golder Associates Inc., and dated October 31, 2018, with supplemental documents received by ADEQ on December 14, 2018. This APP also incorporates previous approvals issued by ADEQ.

2.1 Facility / Site Description [ARS § 49-243(K)(8)]

The site includes the following permitted discharging facility:

Facility	Latitude	Longitude
AEPCO Solid Waste Landfill	32° 03' 44" North	109° 52' 54" West

2.1.1 Financial Capability [A.R.S. § 49-243(N) and A.A.C. R18-9-A203]

The Permittee must demonstrate financial capability under A.R.S. § 49-243(N) and A.A.C. R18-9-A203. The Permittee shall maintain financial capability throughout the life of the facility including closure and post-closure care (if clean-closure is not achieved). The engineering cost estimate, as of December 14, 2018, for closure activities is \$28,500 and for post-closure activities is \$801,000, and was calculated and sealed by Michael Grass, an Arizona registered professional engineer.

2.2 Best Available Demonstrated Control Technology [ARS § 49-243(B) and AAC R18-9-A202 (A)(5)]

In addition to the design specifications described below, the Permittee shall maintain surface water run-on and run-off diversions. These structures shall be constructed and maintained to direct storm water flows from the peak flow away from the landfill according to the final plans referenced in Part 5.0, Items # 3-5 of this permit.

2.2.1 Engineering Design

Operational activities shall be in accordance with the plans approved by the ADEQ Solid Waste Plan Review Unit and the APP/Solid Waste Application, referenced in Part 5.0, Items #3-5 of this permit and the conditions written in this permit.

2.3 Discharge Limitations [ARS §§ 49-201(14), 49-243 and AAC R18-9-A205 (B)]

2.3.1 General Restrictions

The following materials are prohibited from disposal at the AEPCO Solid Waste Landfill:

1. Municipal Solid Waste as referenced in ARS § 49-701(20)
2. Hazardous Waste as defined in ARS § 49-921(5) Special Waste as defined in ARS § 49-851(A)(5)
3. Polychlorinated biphenyl (PCB) waste as defined in 40 CFR 257.3-5(b) and as listed in 40 CFR 258 Appendix II. Biohazardous Medical Wastes as defined in AAC R18-13-1401(5).
4. Biohazardous Medical Wastes as Defined in AAC R18-13-1401(5).
5. Any other waste which is prohibited by Federal or State of Arizona statute or regulation from disposal at a non-municipal solid waste landfill such as:
 - a. Waste Tire(s) as defined in ARS § 49-701(38)
 - b. automobiles
 - c. lead-acid batteries
 - d. freon-containing white goods
 - e. Sewage Sludge as defined in ARS § 49-255(6)
 - f. Household Waste as defined in ARS § 49-701(14)
 - g. Used oil as defined in ARS § 49-701(14)
 - h. dead animals above 40 pounds in weight
 - i. Sludge as defined in 40 CFR 257.2
 - j. Medical Waste as defined in ARS § 49-701(20)

2.3.2 Petroleum Contaminated Soils Restrictions

PCS is prohibited from disposal in the landfill. Treated soils (PCS remediated to concentrations below the non-residential soil remediation levels, as set forth in AAC Title 18, Chapter 7, Article 2, Appendix A) may be disposed at the landfill facility.

2.3.3 Asbestos Monofill Landfill

The Asbestos Monofill is located in a fenced area adjacent to the solid waste landfill and occupies approximately 5.7 acres. The facility is operated as the need arises. The following conditions apply to this special section of the landfill:

1. This section of the landfill shall receive only asbestos-containing materials as defined in 40 CFR § 61.141.
2. Asbestos materials shall be wetted during removal, wet bagged in double bags and labeled.
3. At the end of each operating day, all waste shall be covered with 6 inches of compacted clean fill material.
4. A final cover (cap) 2 feet thick is required to be placed on each waste cell as it is filled to capacity.
5. Cells filled and closed before the issuance of this permit may have different dimensions as long as they have been properly capped with 2 feet of clean, compacted fill.

6. The facility may operate intermittently as long as 6 inches of cover has been placed over the last day's waste and compacted. Cover shall be applied as needed during each operational day.
7. The Asbestos Monofill area shall be fenced and locked separately from the rest of the facility.

2.4 Point of Compliance (P.O.C.) [ARS § 49-244]

The Point of Compliance is established by the following monitoring location:

P.O.C. Location	Latitude	Longitude
MW-LF1	N 32° 03' 41.5"	W 109° 53' 8"

Monitoring requirements for the P.O.C. Well are listed in Section 4.1, Table 4.1.1. The Director may designate additional points of compliance if information on groundwater gradients or groundwater usage indicates the need.

2.5 Monitoring Requirements [ARS § 49-223(G), AAC R18-9-A206(A)]

All monitoring required in this permit shall continue for the duration of the permit, regardless of the status of the facility. All sampling, preservation and holding times shall be in accordance with currently accepted standards of professional practice. Trip blanks, equipment blanks and duplicate samples shall also be obtained, and chain of custody procedures shall be followed, in accordance with currently accepted standards of professional practice. The Permittee shall consult the most recent version of the ADEQ Quality Assurance Project Plan (QAPP) and EPA 40 CFR Part 136 for guidance in this regard. Copies of laboratory analyses and chain of custody forms shall be maintained at the AEPKO headquarters office, however, all documents are available electronically through AEPKO's Document Management System. Upon request, a copy of these documents shall be made available for review by ADEQ personnel.

2.5.1 Discharge Monitoring

Groundwater monitoring shall be conducted on a semi-annual basis and reports shall be submitted to ADEQ annually with constituents and frequencies set forth in Section 2.7.6.1 and Section 4.1, Table 4.1.1.

Landfill gas monitoring shall be conducted on a quarterly basis and reports shall be submitted to ADEQ annually as described in Section 2.7.6.1.

2.5.2 Landfill Gas Monitoring

1. Routine methane gas monitoring shall be conducted quarterly during the operational lifetime and post-closure period. The Director may allow the frequency of the post-closure monitoring program to be decreased to a semiannual or annual basis.
2. Methane gas monitoring shall be conducted in accordance with the approved landfill gas monitoring plan as proposed in Section 3.0, Landfill Gas Monitoring Plan, in the *Aquifer Protection Permit*

Amendment Application AEP CO Solid Waste Landfill, Apache Generating Station, Cochise, Arizona as submitted by Golder Associates Inc., and dated October 31, 2018.

3. The permittee shall operate and maintain methane gas monitoring equipment to ensure that the standards of 40 CFR § 257.3-8 are met. Such routine methane monitoring shall include monitoring gas probes LFG-1 through LFG-4 which are installed along the perimeter of AEP CO Solid Waste Landfill, as shown on Drawing No. 4, of the 10/31/2018 Aquifer Protection Permit Amendment Application. A landfill gas remediation system or other control mechanism may be designed and submitted to ADEQ if methane concentrations are detected above the levels indicated in Section 2.5.2. (4) of this permit.
4. The permittee must ensure, in accordance with 40 CFR § 257.3-8 that the concentration of methane gas does not exceed:
 - a. Twenty-five percent (25%) of the lower explosive limit for gases in facility structures, (excluding gas control or recovery system components); and
 - b. The lower explosive limit for the gases at the property boundary.
5. If a methane gas exceedance occurs at facility structures or at the facility property boundaries, as described above, the permittee shall immediately report the exceedance to ADEQ Solid Waste Unit as specified in Section 2.7.4.1.
6. The permittee shall initiate actions identified in the contingency plan to resolve any problems identified by the investigation that may have led to an LEL exceedance. To implement the corrective action the permittee shall obtain prior approval from the Director according to Section 2.6.5.
7. Upon review of the submitted report, the Director may require additional monitoring, increased frequency of monitoring, amendments to permit conditions, or other actions.

2.5.3 Groundwater Monitoring and Sampling Protocols

Static water levels shall be measured and recorded prior to sampling. Wells shall be purged of at least three borehole volumes (as calculated using the static water level) or until the following specific indicator parameters of pH, temperature and conductivity are stable, whichever represents the greater volume. If evacuation results in the well going dry, the well shall be allowed to recover to 80% of the original borehole volume, or for 24 hours, whichever is shorter, prior to sampling. If after 24 hours there is not sufficient water for sampling, the well shall be recorded as dry for the monitoring event. An

explanation for reduced pumping volumes, a record of the volume pumped, and modified sampling procedures shall be reported and submitted with the annual groundwater monitoring report.

The Permittee may conduct the sampling using the low-flow purging method as described in the Arizona Water Resources Research Center, March 1995 Field Manual for Water Quality Sampling. The well must be purged until indicator parameters stabilize and then samples may be taken for analysis.

2.5.4 Surface Water Monitoring and Sampling Protocols

Not applicable.

2.5.5 Analytical Methodology

All samples collected for compliance monitoring shall be analyzed using EPA approved methods with an Arizona State approved laboratory. The Permittee shall use only EPA approved methods as set forth in Section 4 of this permit, unless the Department authorizes the use of another method. As an exception to this, the Permittee may substitute any EPA approved method for another EPA approved method provided that the substituted method provides equal or lower detection limits. The Department reserves the right to determine the adequacy of the laboratory results based on the detection limits used.

Regardless of the method used, the detection limits must be sufficient to determine compliance with the regulatory limits of the parameters specified in this permit. Analyses shall be performed by a laboratory licensed by the Arizona Department of Health Services, Office of Laboratory Licensure and Certification. For results to be considered valid, all analytical work shall meet quality control standards specified in the approved methods. A list of Arizona State certified laboratories can be obtained at the address below:

Arizona Department of Health Services
Laboratory Licensure, Certification and Training Office
1740 West Adams, Room 203
Phoenix, Arizona 85007
Phone Number: (602) 364-0720

Numeric analytical results shall be reported when the Practical Quantitation Limit (PQL) for an organic compound has been exceeded. If the results fall below the PQL then a Non-Detect (ND) will be reported to show that the analysis was done but fell below the PQL.

2.5.6 Installation and Maintenance of Monitoring Equipment

Monitoring equipment required by this permit shall be installed and maintained so that representative groundwater and methane gas samples can be collected. If new groundwater or methane gas monitoring wells are determined to be necessary, the construction details shall be submitted to the ADEQ Solid Waste Unit for approval prior to installation and the permit shall be amended to include any new points.

2.5.7 Monitoring and Reporting for Non-POC Wells

Non-POC wells, MW-LF2 (near the northern boundary of the landfill) and MW-LF3 (east side of the landfill), will be used to collect groundwater elevation data to verify groundwater flow direction beneath the landfill. MW-LF2 and MW-LF3 may be used to monitor groundwater quality upgradient of the landfill, but such monitoring is not required pursuant to this APP. Additionally, Section 4.1 Alert Levels (ALs) and Aquifer Water Quality Standards (AWQSs) are not applicable to non-POC wells.

2.6 Contingency Plan Requirements

[ARS § 49-243(K)(3), (K)(7) and AAC R18-9-A204 and R18-9-A205]

2.6.1 General Contingency Plan Considerations

At least one copy of the approved contingency and emergency response plan(s) submitted in the application shall be maintained at the location where day-to-day decisions regarding the operation of the facility are made. The facility Permittee shall be aware of and follow the contingency and emergency plans.

Any AL that is exceeded or any violation of an AWQS, or other permit condition shall be reported to ADEQ following the reporting requirements in Section 2.7.3.

Some contingency actions involve verification sampling. Verification sampling shall consist of the first follow up sample collected from a location that previously indicated a violation or that an AL has been exceeded. Collection and analysis of the verification sample shall use the same protocols and test methods to analyze for the pollutant or pollutants that exceeded an AL or violated an AWQS.

2.6.2 Exceedance of Alert Levels

2.6.2.1 Exceedance of Alert Levels Set for Gas Monitoring

If the methane gas concentration in facility structures exceeds twenty-five percent (25%) of the lower explosive limit, or gas concentrations at the landfill boundary exceed the lower explosive limit, the the Permittee will follow the requirements in Section 2.7.4.1.

2.6.2.2 Exceeding of Alert Levels in Groundwater Monitoring

2.6.2.2.1 Alert Levels for Indicator Parameters

Not applicable.

2.6.2.2.2 Alert Levels for Pollutants with Numeric Aquifer Water Quality Standards (AWQS)

1. If preliminary laboratory results indicate an AL for an organic pollutant set in Section 4.1, Table 2.2 has been exceeded at the POC, the Permittee may request the laboratory to re-analyze the sample before conducting any verification

sampling or reporting the results to ADEQ. If the final laboratory results indicate that an AL for an organic pollutant set in Section 4.1, Table 4.1.1 has been exceeded at the POC, the Permittee shall conduct verification sampling within 15 business days of becoming aware of an AL being exceeded.

2. If verification sampling confirms an AL having been exceeded at the POC, the Permittee shall immediately initiate an investigation to identify the cause of the AL being exceeded.
3. The Permittee shall initiate actions identified in the contingency plan of the APP Application referenced in Part 5.0, Items# 3-5 and specific contingency measures identified in Part 2.6 to resolve any problems identified by the investigation which may have led to an AL being exceeded. To implement any other corrective action the Permittee shall obtain prior approval from ADEQ. Alternatively, the Permittee may submit a technical demonstration that the AWQS exceedance is the result of a source other than the landfill, or is the result of an error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. The Permittee may also submit a demonstration, that although an AL is exceeded, pollutants are not reasonably expected to cause a violation of an AWQS.
4. Within thirty (30) days after confirmation of an AL being exceeded at the POC, the Permittee shall submit the laboratory results to the Solid Waste Section, along with a summary of the findings of the investigation, the cause of the AL being exceeded, and actions taken to resolve the problem.
5. Upon review of the submitted report, the Department may require additional monitoring, increased frequency of monitoring, amendments to permit conditions or other actions.
6. Upon justification by the Permittee and written approval by the Department, monitoring frequency may be reduced and/or a monitoring constituent removed from the list.

2.6.3 Aquifer Water Quality Standards (AWQS) Exceedance

1. If preliminary laboratory results indicate that an AWQS listed in Section 4.1, Table 4.1.1 has been exceeded at the POC, the Permittee may request the laboratory to re-analyze the sample before reporting the results to ADEQ. If the final laboratory results indicate that an AWQS listed in Section 4.1, Table 4.1.1 has been exceeded at the POC, the Permittee shall conduct verification sampling within 15 business days of becoming aware of an AWQS violation.
2. If verification sampling confirms that the AWQS is violated for any parameter at the POC, the Permittee shall immediately initiate an evaluation for the cause of the violation, including inspection of all discharging units and all related pollution control devices, and review of any operational and maintenance practices that might have resulted in unexpected discharge. The Permittee also shall submit a report according to Section 2.7.3, which includes a summary of the findings of the investigation, the cause of the violation, and actions taken to resolve the problem. The Permittee shall consider and ADEQ may require corrective action that may include control of the source of discharge, cleanup of affected soil, surface water or groundwater, and mitigation of the impact of pollutants on existing uses of the aquifer. Corrective actions shall be specifically identified in this permit, included in an ADEQ approved contingency plan, or separately approved according to Section 2.6.5.
3. Alternatively, the Permittee may submit a technical demonstration, that the AWQS exceedance is the result of a source other than the landfill, or is the result of an error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality.
4. Upon review of the submitted report, the Department may require additional monitoring, increased frequency of monitoring, amendments to permit conditions or other actions.
5. Upon justification by the Permittee and approval by the Department, monitoring frequency may be reduced and/or a monitoring constituent removed from the list.

2.6.4 Emergency Response and Contingency Requirements for Spills and Unauthorized Discharges

2.6.4.1 Duty to Respond

The Permittee shall act immediately to correct any condition that results in imminent and substantial endangerment to public health or the environment.

2.6.4.2 Spills of Hazardous or Toxic Materials

In the event of any accidental spill or unauthorized discharge of suspected hazardous or toxic materials on the facility site, the Permittee

shall promptly isolate the area and attempt to identify the spilled material. The Permittee shall record information, including name, nature of exposure and follow-up medical treatment, if necessary, on persons who may have been exposed during the incident. Spilled materials, absorbents, and contaminated media generated during emergency response shall be removed and disposed of according to applicable federal, state and local regulations.

2.6.5 Corrective Actions

The Permittee shall obtain written approval from the Solid Waste Section prior to implementing a corrective action to accomplish any of the following goals in response to exceeding an AL or violation of an AWQS, or other permit condition:

1. Control of the source of an unauthorized discharge;
2. Soil cleanup;
3. Cleanup of affected surface waters;
4. Cleanup of affected parts of the aquifer;
5. Mitigation to limit the impact of pollutants on existing uses of the aquifer.

Actions identified in the approved contingency plan referenced in Part 5.0, Items #3-5 and specific contingency measures identified in Part 2.6 have already been approved by ADEQ. Within 30 days of completion of any corrective action, the Permittee shall submit to the Solid Waste Unit a written report describing the causes and impacts of and actions taken to resolve the problem.

2.7 Reporting and Recordkeeping Requirements [ARS § 49-243(K)(2) and AAC R18-9-A206(B) and R18-9-A207]

2.7.1 Groundwater Data

1. The Permittee shall maintain groundwater data and submit it to the ADEQ Solid Waste Section at the frequency set forth in Section 2.7.6.1. and Table 4.1.1.
2. Table 4.1.1. in Section 4.1 lists the parameters to be monitored and the frequency for reporting results for groundwater compliance monitoring.
3. All reports shall include the information contained in Section 6.9.3.

2.7.2 Operation Inspection / Log Book and Recordkeeping

A copy of this permit shall be maintained at the Apache Generating Station at all times. A log book of the inspections and measurements required by this permit shall be maintained at the Apache Generating Station, and shall be retained for at least ten years from the date of each inspection. Upon request, the permit and the logbook shall be made immediately available for review by ADEQ personnel. The information in the log book shall include, but not be limited to, the information contained in Section 6.9.3.

2.7.3 Permit Violation and Alert Level Status Reporting

1. The Permittee shall notify the Solid Waste Section in writing within five days (except for Emergency Response for Spills as provided in Section 2.6.4) of becoming aware of a violation of any permit condition, discharge limitation or of an AL being exceeded.
2. The Permittee shall submit a written report to the Solid Waste Section within 30 days of becoming aware of the violation of any permit condition or discharge limitation. The report shall document all of the following:
 - a. Identification and description of the permit condition for which there has been a violation and a description of its cause.
 - b. The period of violation including exact date(s) and time(s), if known, and the anticipated time period during which the violation is expected to continue.
 - c. Any corrective action taken or planned to mitigate the effects of the violation, or to eliminate or prevent a recurrence of the violation.
 - d. Any monitoring activity or other information which indicates that any pollutants would be reasonably expected to cause a violation of an AWQS.
 - e. Proposed changes to the monitoring which include changes in constituents or increased frequency of monitoring.
 - f. Description of any malfunction or failure of pollution control devices or other equipment or processes which may have caused or contributed to the above exceedance.

2.7.4 Operational, Other or Miscellaneous Reporting

2.7.4.1 Methane Gas Exceedance Reporting

The following notifications are required if there is a methane gas exceedance:

1. Within twenty-four (24) hours or one (1) business day of any methane gas exceedance where the gas concentration in facility structures exceeds twenty-five percent (25%) of the lower explosive limit or gas concentrations at the landfill boundary exceed the lower explosive limit, the permittee shall notify the ADEQ Solid Waste Unit.
2. Within seven (7) days of detection, the permittee shall place in the operating record a description of the steps taken to protect human health. A copy of this description shall be sent to the ADEQ Solid Waste Unit.
3. Within sixty (60) days of detection of any methane gas exceedance, a remediation plan shall be implemented and a copy of the plan placed in the operating record. A copy of the plan,

accompanied by a notification that the plan has been implemented, shall be sent to the ADEQ Solid Waste Unit.

2.7.4.2 Operational and Closure/Post-Closure Reporting of Groundwater/Methane Monitoring and Inspections

1. The results of groundwater monitoring shall be submitted to the ADEQ Solid Waste Unit in accordance with report deadlines set forth in Sections 2.7.6.1 and 2.7.6.2.
2. Methane monitoring reports shall be submitted to the ADEQ Solid Waste Unit in accordance with report deadlines set forth in Sections 2.7.6.1 and 2.7.6.2.

2.7.5 Reporting Location

All information shall be submitted to:

Arizona Department of Environmental Quality
 Solid Waste Unit
 1110 West Washington Street
 Phoenix, Arizona 85007
 Phone (602) 771-4123

2.7.6 Reporting Deadline

2.7.6.1 The following table lists the report due dates during the operational period and closure/post closure period for semi-annual groundwater monitoring and quarterly methane gas monitoring events:

Landfill Gas Monitoring Conducted During Quarter Ending:	Groundwater Monitoring in POC Well Conducted Semi-Annually:	Operational Period Annual Report Due By:	Closure/Post-Closure Period Annual Report Due By:
March 31	June 30	January 31	January 31
June 30			
September 30	December 31	January 31	January 31
December 31			

2.7.6.2 Groundwater and methane gas monitoring reports for the closure/post closure period shall be submitted annually and shall be received by January 31 of each year reporting on the monitoring events of the prior year unless otherwise specified in this permit.

2.7.7 Changes to Facility Information in Section 1.0

The Solid Waste Section shall be notified within 10 days of any change of facility information including Facility Name, Permittee Name, Mailing or Street Address, Facility Contact Person or Emergency Telephone Number.

2.8 Temporary Cessation

[ARS § 49-243(K)(8) and AAC R18-9-A209(A)]

Not applicable.

2.9 Closure

[ARS §§ 49-243(K)(6), 49-252 and AAC R18-9-A209(B)]

When the facility closes, then the Permittee shall maintain the landfill cover design requirements as set forth in Part 5.0, Items #3-5.

2.10 Post Closure Plan

[ARS §§ 49-243(K)(6), 49-252 and AAC R18-9-A209(C)]

The post-closure care program shall ensure that any reasonable probability of further discharge from the facility, and of exceeding Aquifer Water Quality Standards at the applicable points of compliance, are eliminated to the greatest extent practicable. The post-closure care program will maintain the effectiveness and integrity of the final cover, including making repairs to the final cover as necessary to correct the effects of settlement, subsidence, erosion, or other events. The length of the post-closure care period is 30 years as requested in the application. The length of the post-closure care period may be:

1. Increased if the Director determines that the lengthened period is necessary to protect public health and the environment.
2. Decreased if the Permittee demonstrates to the Director that the reduced period is sufficient to protect public health and the environment.
3. The post-closure care program shall consist of at least the following:
 - a. Groundwater monitoring pursuant to Part 2.5.3 with the frequency as set forth in Sections 2.7.6.1 and 2.7.6.2, Tables 4.1.1.
 - b. Program to maintain the effectiveness and integrity of the final cover. The program shall include a schedule to inspect the final cover pursuant to AAC R18-9 A209(C)(1)(d) and the conditions of this permit, along with measures to repair the final cover as necessary throughout the post-closure care period.
 - c. Program to maintain the effectiveness and integrity of the storm water management system. The program shall include a schedule to inspect all storm water management structures pursuant to AAC R18-9-A209(C)(1)(d) along with measures to repair storm water structures as necessary throughout the post-closure care period.

4. The Permittee shall control public access in accordance with the APP application referenced in Part 5.0, Items #1-5 of this permit.
5. The Permittee shall comply with the record keeping requirements specified in Part 2.7 of this permit
6. The Permittee shall provide and maintain financial assurance for the costs associated with closure, post-closure maintenance, and any necessary corrective action as a result of known releases from the landfill facility in accordance with AAC R18-9-A203 and any rule adopted pursuant to ARS § 49-761(J).
7. The Permittee shall notify the Department in writing when the post-closure care activities are planned to begin after the landfill space has been exhausted and when they are completed. The written notice shall include a certification, signed by an independent Arizona registered engineer hired by the Permittee, verifying that post-closure care has been completed in accordance with the approved post-closure care plan.

3.0 COMPLIANCE SCHEDULE [A.R.S. § 49-243(K)(5) and A.A.C. R18-9-A208]

For each compliance schedule item listed below, the Permittee shall submit the required information, including a cover letter that lists the compliance schedule items, to the Solid/Hazardous Waste Section, Solid Waste Unit.

No	Description	Due by	Amend. Required
1	The Permittee shall submit a demonstration that the financial assurance mechanism listed in Section 2.1.2, Financial Capability, is being maintained as per A.R.S. 49-243.N.4 and A.A.C. R18-9-A203(H) for all estimated closure and post-closure costs including updated costs submitted under Section 3.0, No. 2 below. The demonstration shall include a statement that the closure and post-closure strategy has not changed, the discharging facilities listed in the permit have not been altered in a manner that would affect the closure and post-closure costs, and discharging facilities have not been added. The demonstration shall also include information in support of a performance surety bond as required in A.A.C. R18-9-A203(C)(2).	Month XX, 2023 and every 6 years thereafter.	No
2	The Permittee shall submit updated cost estimates for facility closure and post-closure, as per A.A.C. R18-9-A201(B)(5) and A.R.S. 49-243.N.2.a.	Month XX, 2023 and every 6 years thereafter.	Yes
3	The Permittee shall complete installation of the new POC well (MW-LF1) as described in the APP amendment application Sections 2.0 to 2.3, and submit a well completion report.	Within 365 days following the issuance date of this permit	No

4	The Permittee shall complete installation of the four (4) new landfill gas monitoring probes (LFG-1 through LFG-4) as described in the APP amendment application Section 3.0, and submit a completion report.	Within 365 days following the issuance date of this permit	No
5	The Permittee shall complete abandonment of existing landfill groundwater monitoring wells (A1-1 (POC), A1-2 and A-2) as described in the APP amendment Application Section 2.4, and submit a well abandonment report.	Within 365 days of permit issuance.	No
5	The Permittee shall conduct the first of eight (8) rounds of quarterly ambient groundwater monitoring in MW-LF1.	Within fourteen (14) days following the installation of MW-LF1.	No
6	Following completion of eight (8) rounds of quarterly ambient groundwater monitoring in MW-LF1, the Permittee shall submit an APP amendment application to ADEQ that includes ambient groundwater monitoring statistical analysis and calculated ALs and AQLs.	Within 90 days of receiving the final laboratory report from the eighth round of quarterly ambient groundwater monitoring in MW-LF1.	Yes
7	The Permittee shall conduct the first quarterly monitoring event in the four (4) new landfill gas probes (LFG-1 through LFG-4).	Within fourteen (14) days following the installation of all 4 new landfill gas monitoring probes.	No
8	The Permittee shall submit a revised Contingency and Emergency Response Plan to ADEQ that includes contingency actions to be followed in accordance with the conditions of this permit.	Within 180 days following the issuance date of this permit.	No

4.0 TABLES OF MONITORING REQUIREMENTS

4.1 GROUNDWATER MONITORING

**TABLE 4.1.1 - ALERT LEVELS AND AQUIFER QUALITY LIMITS FOR
 POC WELL MW-LF1**

Parameter	AWQS ¹ (mg/l)	Alert ² Level (mg/l)	Analytical ³ Method	Monitoring Frequency	Reporting Frequency
Alkalinity (total)	NA	NA	EPA 310.1	Semi-annual	Annual
Temperature	NA	NA	Field	Semi-annual	Annual
Specific Conductance	NA	NA	Field	Semi-annual	Annual
pH	NA	NA	Field	Semi-annual	Annual
Chloride	NA	NA	EPA 300.0	Semi-annual	Annual
Fluoride	4.0	Reserved	EPA 340.2	Semi-annual	Annual
Nitrate (as N)	10.0	Reserved	EPA 352.1	Semi-annual	Annual
Depth to Groundwater	NA	NA	Field	Semi-annual	Annual
Barium	2.0	Reserved	Method 6010	Semi-annual	Annual
Arsenic	0.05	Reserved	Method 6010	Semi-annual	Annual
Cadmium	0.005	Reserved	Method 6010	Semi-annual	Annual
Chromium (total)	0.1	Reserved	Method 6010	Semi-annual	Annual
Thallium	0.002	Reserved	Method 6010	Semi-annual	Annual
Lead	0.05	Reserved	Method 6010	Semi-annual	Annual
Mercury	0.002	Reserved	7440 / 7471	Semi-annual	Annual

Parameter	AWQS¹ (mg/l)	Alert² Level (mg/l)	Analytical³ Method	Monitoring Frequency	Reporting Frequency
Selenium	0.05	Reserved	Method 6010	Semi-annual	Annual
Antimony	0.006	Reserved	Method 6010	Semi-annual	Annual
Benzene	0.005	0.004	EPA 8260	Semi-annual	Annual
Carbon tetrachloride	0.005	Reserved	EPA 8260	Semi-annual	Annual
Dichloromethane	0.005	Reserved	EPA 8260	Semi-annual	Annual
o -Dichlorobenzene	0.6	Reserved	EPA 8260	Semi-annual	Annual
para-Dichlorobenzene	0.075	Reserved	EPA 8260	Semi-annual	Annual
1,2-Dichloroethane	0.005	Reserved	EPA 8260	Semi-annual	Annual
1,1-Dichloroethylene	0.007	Reserved	EPA 8260	Semi-annual	Annual
trans-1,2- Dichloroethylene	0.1	Reserved	EPA 8260	Semi-annual	Annual
1,2-Dichloropropane	0.005	Reserved	EPA 8260	Semi-annual	Annual
Ethylbenzene	0.7	Reserved	EPA 8260	Semi-annual	Annual
Styrene	0.1	Reserved	EPA 8260	Semi-annual	Annual
Tetrachloroethylene	0.005	Reserved	EPA 8260	Semi-annual	Annual

Parameter	AWQS ¹ (mg/l)	Alert ² Level (mg/l)	Analytical ³ Method	Monitoring Frequency	Reporting Frequency
Toluene	1.0	Reserved	EPA 8260	Semi-annual	Annual
1,1,1-Trichloroethane	0.20	Reserved	EPA 8260	Semi-annual	Annual
1,1,2-Trichloroethane	0.005	Reserved	EPA 8260	Semi-annual	Annual
Trichloroethene	0.005	Reserved	EPA 8260	Semi-annual	Annual
Vinyl chloride	0.002	Reserved	EPA 8260	Semi-annual	Annual
Xylenes	10	Reserved	EPA 8260	Semi-annual	Annual

¹ AWQS = aquifer water quality standard (A.A.C. R18-11-406). N/A – Not applicable.

² “Reserved” means that Alert Levels (AL) will be set once eight (8) quarters of monitoring data is completed.

³ The Permittee shall use only EPA approved methods unless ADEQ authorizes the use of another method. The Permittee may substitute any EPA approved method for any other, if the substituted method provides detection limits that are equal to or lower than the limits of the originally approved method. All laboratory analyses shall have detection limits that are adequate for detection of the regulatory limits of the parameter in question. ADEQ reserves the right to determine the adequacy of the laboratory results based on the detection limits used.

5.0 REFERENCES AND PERTINENT INFORMATION

The terms and conditions set forth in this permit have been developed based upon the information contained in the following documents, which are on file with the Department:

- REVISED APPENDIX A – REVISED CLOSURE AND POST-CLOSURE STRATEGY AND COST ESTIMATES.** Submitted by Golder Associates Inc. and dated December 14, 2018.
- AQUIFER PROTECTION PERMIT APPLICATION AEPSCO Solid Waste Landfill.** Submitted by Golder Associates Inc. and dated October 31, 2018.
- AQUIFER PROTECTION PERMIT APPLICATION - Continued Operation of Existing Discharging Facilities** Prepared by Arizona Electric Power Cooperative, Inc. dated June 1, 1999 and received by ADEQ June 9, 1999.
- AQUIFER PROTECTION PERMIT APPLICATION - APPENDICES -- VOLUME 1 - Continued Operation of Existing Discharging Facilities** Prepared by Arizona

Electric Power Cooperative, Inc. dated June 1, 1999 and received by ADEQ June 9, 1999.

5. **AQUIFER PROTECTION PERMIT APPLICATION - APPENDICES -- VOLUME 2 - Continued Operation of Existing Discharging Facilities** Prepared by Arizona Electric Power Cooperative, Inc. dated June 1, 1999 and received by ADEQ June 9, 1999.
6. **Aquifer Protection Permits Determination of Applicability** Prepared by Arizona Electric Power Cooperative, Inc. dated July 5, 1996 and received by ADEQ July 10, 1996.
7. **Final Construction Quality Assurance Report for the Combustion Waste Disposal Facility at the AEPCO Apache Generating Station - Volume I** by Vector Engineering, Inc. dated January 1996.
8. **Final Construction Quality Assurance Report for the Combustion Waste Disposal Facility at the AEPCO Apache Generating Station - Volume V** by Vector Engineering, Inc. dated January 1996.
9. **Combustion Waste Disposal Facility Fissure Investigation; AEPCO - Apache Generating Station** by SHB AGRA, Inc. dated May 27, 1993.
10. **Borrower's Environmental Report - Ash and Scrubber Sludge Disposal Facilities; AEPCO** by Burns & McDonnell dated 1992 and Received by ADEQ August 2, 1993.
11. **Borrower's Environmental Report - Ash and Scrubber Sludge Disposal Facilities; AEPCO** by Burns & McDonnell dated 1992 and Received by ADEQ August 2, 1993.
12. **Supplement to the Borrower's Environmental Report - Ash and Scrubber Sludge Disposal Facilities; AEPCO** by Burns & McDonnell dated 1992 and Received by ADEQ August 2, 1993.
13. **APPLICATION for Solid Waste Facility Approval of the Ash/Scrubber Sludge Disposal Facility** Prepared by Arizona Electric Power Cooperative, Inc., received by ADEQ August 2, 1993.
14. **Hydraulic Study for the Combustion Waste Disposal Facility in the Big Draw Drainage Basin - (Supplement to the Hydraulic Study)** by Burns & McDonnell dated March 1993.
15. **Supplement to Aquifer Protection Permit Application** received by ADEQ October 27, 1992

6.0 GENERAL CONDITIONS

6.1 Annual Registration Fees [ARS §§ 49-747(C)(8)]

The Permittee shall pay a flat Annual Registration Fee to ADEQ based on the landfill being closed to the public and accepting only nonhazardous waste.

6.2 Landfill Disposal Fee [ARS § 49-836(A)(1)]

The Permittee shall pay a solid waste landfill disposal fee based on the amount of waste accepted.

6.3 Duty to provide information [ARS §§ 49-243(K)(2) and 49-243(K)(8)]

The Permittee shall furnish to the Director, or an authorized representative, within a time specified, any information which the Director may request to determine whether cause exists for modifying, or terminating this permit, or to determine compliance with this permit. The Permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

6.4 Severability [ARS § 49-243(K)(8)]

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

6.5 Proper Operation and Maintenance [ARS § 49-243(K)(8)]

The Permittee shall, at all times, properly operate and maintain all facilities, treatment processes, and discharge control systems which are installed or used by the Permittee to achieve compliance with the terms and conditions of this permit.

6.6 Compliance with Aquifer Water Quality Standards [ARS § 49-243(B)(2) and (B)(3)]

1. The Permittee as a result of operation of this landfill facility will in no event discharge, cause or contribute to a violation of aquifer water quality standards at the applicable point of compliance for the facility.
2. The Permittee shall not further degrade at the applicable point of compliance the quality of any aquifer that at the time of issuance of the permit violates the aquifer water quality standards for that pollutant.

6.7 Technical and Financial Capability

[ARS §§ 49-243(K)(8) and 49-243(N) and AAC R18-9-A202(B) and R18-9-A203(E) and (F)]

The Permittee shall have and maintain the technical and financial capability necessary to fully carry out the terms and conditions of this permit. Any bond, insurance policy, trust fund, or other financial assurance mechanism provided as a demonstration of financial capability in the permit application, pursuant to AAC R18-9-A203(D), shall be in effect prior to any discharge authorized by this permit and shall remain in effect for the duration of the permit.

6.8 Reporting of Bankruptcy or Environmental Enforcement [AAC R18-9-A207(C)]

The Permittee shall notify the Director in writing within five days after the occurrence of any one of the following:

1. The filing of bankruptcy by the Permittee.
2. The entry of any order or judgment not issued by the Director against the Permittee for the enforcement of any environmental protection statute or rule.

6.9 Monitoring and Records. [ARS § 49-243(K)(8) and AAC R18-9-A206]

The Permittee to assure compliance with this permit shall conduct well sample monitoring and record-keeping as follows:

1. Samples and measurements taken for the purpose of monitoring shall be done in accordance with EPA standards to assure accurate representation of the groundwater being monitored.
2. The Permittee shall retain records of all monitoring information, including: copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of 10 years from the date of the sample, measurement report, or application. This period may be extended by request of the Director at any time.
3. At a minimum, records of monitoring information shall include:
 - a. The date, time, and exact place of sampling or measurements
 - b. The individual(s) who performed the sampling or measurements
 - c. The date(s) analyses were performed
 - d. The individual(s) who performed the analyses
 - e. The analytical techniques or methods used
 - f. The results of such analyses
 - g. The chain of custody records, and
 - h. Any field notes relating to the information described in (a) - (g) above.

6.10 Other information. [ARS § 49-243(K)(8)]

Where the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, the Permittee shall promptly submit the correct facts or information.

6.11 Inspection and Entry. [ARS §§ 49-203(B) and 41-1009]

The Permittee shall allow the Director, or an authorized representative to enter and inspect the facility in accordance with ARS §§ 41-1009 and 49-203(B) as reasonably necessary to ensure compliance as set forth in with Title 49, Chapter 2, Article 3 of the Arizona Revised Statutes, and Title 18, Chapter 9, Articles 1 through 4 of the Arizona Administrative Code.

6.12 Permit Transfer.

This permit may not be transferred to any other person except after notice to and approval of the transfer by the Department. No transfer will be approved until the applicant complies with all transfer requirements as specified in A.A.C. R18-9-A212(B) and (C).

7.0 APPROVAL HISTORY

ITEM #	DATE	APPROVAL NO.	Description
1	10/31/2002	02003800A	AEPCO Solid Waste Landfill
2	(this approval)	02003800	AEPCO Solid Waste Landfill